In the Claims:

- 1. (original) A fabrication method, comprising the steps of:
 - monitoring the exhaust of a process chamber; and
 - automatically sampling said exhaust when a predetermined event occurs.
- 2. (original) The method of Claim 1, wherein said step of monitoring is done using an in-situ particle monitor.
- 3. (original) The method of Claim 1, wherein said step of sampling is done by inserting a collection device into said exhaust.
- 4. (original) The method of Claim 1, wherein said event is the detection of a particle excursion.
- 5. (original) The method of Claim 1, wherein said exhaust is sampled by redirecting said exhaust to a sampling area.
- 6. (original) The method of Claim 1, wherein an electrical control signal of said process chamber is monitored and correlated to said event.

- 7. (original) A fabrication method, comprising the steps of:
 - monitoring at least one signal of a process chamber; and

sampling the exhaust from said process chamber when a predetermined event occurs.

- 8. (original) The method of Claim 7, wherein said signal is an electrical control signal.
- 9. (original) The method of Claim 7, wherein said predetermined event is a variation in said signal.
- 10. (original) The method of Claim 7, wherein said predetermined event is the detection of a given particle flux by an in-situ particle monitor located in said exhaust.
- 11. (original) A fabrication method, comprising the steps of:

monitoring a signal from a process chamber;

monitoring the exhaust from said process chamber; and

correlating variations in said signal to particle excursions in said exhaust to produce relationships between said variations and said excursions.

- 12. (original) The method of Claim 11, further comprising the step of analyzing said particle excursion using said relationship.
- 13. (original) The method of Claim 11, further comprising the step of triggering sample collection from said exhaust according to said variations in said signal.

- 14. (original) A wafer processing system, comprising:
 - a chamber with an exhaust;
 - a particle monitor located in said exhaust;
 - wherein said particle monitor is connected to cause a particle sampler to gather samples from said exhaust.
- 15. (original) The system of Claim 14, wherein said sampler gathers samples by being inserted into said exhaust.
- 16. (original) The system of Claim 14, wherein said sampler gathers samples by opening valves so that said exhaust passes to a sampling area.
- 17. (original) The system of Claim 14, wherein said sampler is a membrane filter.
- 18. (original) The system of Claim 14, wherein said monitor causes said sampler to gather samples when a predetermined particle flux is detected.